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09/899,629	07/05/2001	Shuang Liu	PH-7176	5136

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EXAMINER

WANG, SHENGJUN

ART UNIT	PAPER NUMBER
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1617

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/899,629

Filing Date: July 05, 2001

Appellant(s): LIU ET AL.

Brian J. Hubbard
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed December 9, 2004.

(1) Real Party in Interest

VB

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

The brief does not contain a statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief. Therefore, it is presumed that there are none. The Board, however, may exercise its discretion to require an explicit statement as to the existence of any related appeals and interferences.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is substantially correct. The changes are as follows:

The rejection of claims 19-22, 30-33, 35-39 over Rajopadhye et al (US 6537520) in view of Vanderheyden et al. (US 5,679,318) and in further view of Nippon oils (JP 56144060) are withdrawn herein in view of appellant's statements that at the time the instant invention was made, the instant application and US Patent No. 6,537,520 were both owned by the same.

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(7) Grouping of Claims

The appellant's statement in the brief that each and every claim do not stand or fall together is not agreed with because the rejections are made based on the species elected in the response of April 8, 2003. Appellant has not disputed that the appealed claims do not read on the elected species. Therefore, the claims as appealed should stand or fall together.

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

The following is a listing of the prior art of record relied upon in the rejection of claims under appeal.

US Patent 5,707,603	Toner et al.	January 13, 1998
US Patent 5,750,088	Sworin et al.	May 12, 1998
US 5,679,318	Vanderheyden et al.	October 21, 1997
US 6,537,520	Rajopadhye et al.	March 25, 2003
JP 56-144060	Nippon Oils and Fats	November 10, 1981

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 19-22, 30-33, 35-39 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 22, 28-30 of U.S. Patent No. 6537520 in view of Vanderheyden et al. (US 5,679,318) and in further view of Nippon oils (JP 56144060).

Claims 19-22, 30-33, 35-39 are rejected under 35 U.S.C. 103(a) as being obvious over Sworin et al. (5,750,088), or Toner et al. (US 5,707,603), in view of Vanderheyden et al. (US 5,679,318) and in further view of Nippon oils (JP 56144060).

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These rejections have been fully set forth in the office action mailed October 28, 2003 and are reiterated in full below..

(11) Response to Argument

1. Claims 19-22, 30-33, 35-39 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 22, 28-30 of U.S. Patent No. 6537520 in view of Vanderheyden et al. (US 5,679,318) and in further view of Nippon Oils and Fats (JP56-144060).

2. '520 claims a pharmaceutical composition, or kit, comprising the radionuclide herein. '520 does not expressly claims the stabilizers in the composition or kit. However, Vanderheyden et al. teaches that therapeutical radionuclide compositions generally require the presence of stabilizer. The stabilizer provides enhanced long term stability. One of the well know stabilizer is antioxidant. See, particularly, the abstract. Examples of antioxidants are gentisic acid, or its derivatives, or functionally similar compounds (column 10, lines 43-58). The radionuclide may be ⁹⁰Y (column 5, lines 19-34). Nippon Oils and Fats teaches gallic acid is a known antioxidant, and are suitable for human consumption. See, particularly, the abstract.

Therefore, it would have been prima facie obvious to a person of ordinary skill in the art, at the time the claimed the invention was made, to add antioxidants to the composition claimed in '550 as stabilizers. The employment of the particular antioxidants, e.g., gallic acid and/or gentisic acid is seen to be a selection from amongst equally suitable material and as such obvious, absent evidence to the contrary. Ex parte Winters 11 USPQ 2nd 1387 (at 1388).

Appellants argue that the double Patenting rejections over '520 are improper because references other than the '520 patent were cited in the rejections. The arguments have been fully

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considered, but are not persuasive. It should be understood that secondary references are permissible in the double patenting rejections. See, MPEP 8.04.

3. In response to appellants' arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Particularly, Vanderheyden et al. teach a specific dihydroxybenzoic acid, and its derivatives or functionally similar compounds, for use as antioxidants. The teaching would have fairly suggested that trihydroxybenzoic acid would be similarly useful. Nippon Oil and Fats is cited to show the trihydroxy benzoic acid is a known antioxidant in the art. Therefore, considering the cited references as a whole, the employment of trihydroxy benzoic acid as a stabilizer in radioactive therapeutical composition would have been obvious to one of ordinary skill in the art. The examiner has noted that appellant meticulously excluded the compounds particularly disclosed by Vanderheyden et al. from the claimed antioxidants herein. Such negative limitations are sufficient to avoid a clear anticipation by the prior art, but are not persuasive to the obvious rejections set forth above. The scope of antioxidants suggested by Vanderheyden et al. is much larger than those three specific compounds. Vanderheyden et al. teach the stabilizers used in radioactive composition may be ascorbic acid, gentisic acid, reductic acid, and their derivatives, and functionally similar compounds. (col. 10, line 43-50). In view of the teaching by Vanderheyden et al, and the fact that gallic acid is a structural derivative of gentisic acid (with one more hydroxyl group at the aromatic ring), and is a known antioxidant, one of ordinary skill in the art would have seen the employment of gallic acid in a radio active composition as an obvious variation to gentisic acid.

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Further, there is no evidence on the record showing the antioxidants herein recited are any different functionally from those disclosed by Vanderheyden et al.

In response to appellants' arguments that Nippon Oil and Fats is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Nippon oil is reasonably pertinent to the particular problem with which the applicant was concerned, i.e., non-toxic antioxidant suitable for human consumption.

Appellants further contend that Nippon Oils and Fats requires the combination of ascorbic acid and gentisic acid, and therefore, teach away from the instant claims.

The arguments have been fully considered but are not persuasive. It is noted that the features upon which applicant relies (i.e., no combination with ascorbic acid) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Further, the rejections are based on the combination of the cited references, Nippon oil was cited to show that the trihydroxy benzoic acid recited herein is known in the art as an antioxidant.

4. Claims 19-22, 30-33, 35-39 are rejected under 35 U.S.C. 103(a) as being obvious over Sworin et al. (5,750,088), or Toner et al. (US 5,707,603), in view of Vanderheyden et al. (US 5,679,318) and in further view of Nippon Oils and Fats (JP56-144060).

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Sworin et al., or Toner et al. teaches radionuclide conjugates wherein the radionuclide attached to a peptide, or protein, or peptidomimetic moiety through a chelator moiety. See, particularly, the abstract and the claims in Sworn et al.; and the abstract and claims in Toner et al.

The primary references do not teach expressly adding stabilizers, such as gallic acid, in the radionuclide conjugate composition.

However, Vanderheyden et al. teach that therapeutical radionuclide compositions generally require the presence of stabilizers. The stabilizers provide enhanced long-term stability. One of the well know stabilizers is antioxidant. See, particularly, the abstract. Examples of antioxidants are gentisic acid, or its derivatives, or functionally similar compounds (column 10, lines 43-58). The radionuclide may be ⁹⁰Y (column 5, lines 19-34). Nippon Oils and Fats teaches gallic acid is a known antioxidant, and are suitable for mammal consumption. See, particularly, the abstract.

Therefore, it would have been prima facie obvious to a person of ordinary skill in the art, at the time the claimed the invention was made, to add antioxidants to the radionuclide conjugate compositions disclosed in the primary references as stabilizers. The employment of the particular antioxidants, e.g., gallic acid and/or gentisic acid is seen to be a selection from amongst equally suitable material and as such obvious, absent evidence to the contrary. Ex parte Winters 11 USPQ 2nd 1387 (at 1388).

5. In response to appellants' arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re* .

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Merck & Co., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Particularly, Vanderheyden et al. teach a specific dihydroxyl benzoic acid, and its derivatives or functionally similar compounds, for use as antioxidants. The teaching would have fairly suggested that trihydroxybenzoic acid would be similarly useful. *Nippon Oils and Fats* is cited to show the trihydroxy benzoic acid is a known antioxidant in the art. Therefore, considering the cited references as a whole, the employment of trihydroxy benzoic acid as a stabilizer in radioactive therapeutical composition would have been obvious to one of ordinary skill in the art. The examiner has noted that appellant meticulously excluded the compounds particularly disclosed by Vanderheyden et al. from the claimed antioxidants herein. Such negative limitations are sufficient to avoid a clear anticipation by the prior art, but are not persuasive to the obvious rejections set forth above. The scope of antioxidants suggested by Vanderheyden et al. is much larger than those three specific compounds. Vanderheyden et al. teach the stabilizers used in radio active composition may be ascorbic acid, gentisic acid, reductic acid, and their derivatives, and functionally similar compounds. (col. 10, line 43-50). In view of the teaching by Vanderheyden et al, and the fact that gallic acid is a structural derivative of gentisic acid (with one more hydroxyl group at the aromatic ring), and is a known antioxidant, one of ordinary skill in the art would have seen the employment of gallic acid in a radio active composition as an obvious variation to gentisic acid. Further, there is no evidence on the record showing the antioxidants herein recited are any different functionally from those disclosed by Vanderheyden et al.

6. In response to appellants' argument that *Nippon Oils and Fats* is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned,

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in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Nippon oil is reasonably pertinent to the particular problem with which the applicant was concerned, i.e., non-toxic antioxidant suitable for human consumption.

7. In response to appellants' argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Appellants further contend that Nippon Oils and Fats requires the combination of ascorbic acid and gentisic acid, and therefore, teaches away from the instant claims.


The arguments have been fully considered but are not persuasive. It is noted that the features upon which applicant relies (i.e., not a combination with ascorbic acid) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Further, the rejections are based on the combination of the cited references, Nippon oil was cited to show that the trihydroxy benzoic acid recited herein is known in the art as an antioxidant.

The appellants contend that the claims are not stand or fall together based on the particular limitation recited in each of the dependent claims. The examiner respectfully

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disagrees. It is noted that the claims have been examined insofar as they read on elected species (office action mailed October 28, 2003). All the rejections are made based on the species elected in the response of April 8, 2003. Appellant has not disputed that the appealed claims do not read on the elected species. Therefore, the claims as appealed should stand or fall together.

For the above reasons, it is believed that the rejections should be sustained.


SHENGJUN WANG
PRIMARY EXAMINER

Respectfully submitted,

Shengjun Wang
Primary Examiner
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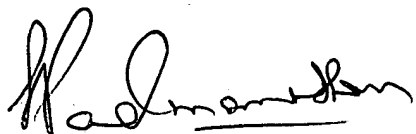
March 21, 2005

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